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UNIDO activities in energy and the environment

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Report by the Director General

The present document reports on the implementation of General Conference resolution GC.17/Res.4 and provides information on latest developments. It supplements the information contained in progress reports presented to the Industrial Development Board in the Annual Report of UNIDO 2016 (IDB.45/2) and 2017 (IDB.46/2).

I. Towards a Circular Economy

1. UNIDO's Departments of Energy (PTC/ENE) and Environment (PTC/ENV) are addressing the topic of Circular Economy directly, participating in international forums and adjusting their programmes of work to offer Member States feasible means by which to (a) introduce circularity into their economies in general, and industrial processes in particular, and (b) adapt to evolving international trade dynamics.
2. PTC/ENE is supporting Member States embrace the Circular Economy by catalysing entrepreneurship and eco-innovation via the Global Cleantech Innovation Programme (GCIP). PTC/ENE is also supporting circularity through Energy Service Companies promoting business models offering energy as a service, not a product. Through the promotion of renewable energy and local manufacturing of clean energy equipment, PTC/ENE is also helping displace fossil fuels and the linear economy characterized by them.
3. PTC/ENV, through its Resource Efficient and Cleaner Production Programme and Transfer of Environmentally Sound Technologies methodology, contributes to improved resource efficiency and greater circularity in industry. Particularly through its Stockholm Convention, but also Montreal Protocol and Minamata Convention activities, PTC/ENV eliminates toxic or otherwise harmful substances to counteract degradation of resources and promote recycling and re-use, and improves the viability of recycling processes. The Montreal Protocol Division achieves extended product

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durability by promoting improved design, updated manufacturing and qualified service and repair. This not only supports resource circularity, it also creates and secures employment in Member States' economies.

4. On the policy level, PTC/ENV undertook three informal briefings to Member States, as per GC.17/Res.4, paragraph 2(i), addressing aspects and implications of Circular Economy and collecting experiences. PTC/ENV also led UNIDO's participation in ten high-profile Circular Economy-themed events during the reporting period, firmly establishing UNIDO's global leadership and expertise in this area.

II. Enhancing service delivery

5. In line with GC.17/Res.4, paragraph 2(a), the departments are increasing linkages under multi-focal areas, such as Circular Economy, Sustainable Cities, and the Programmes for Country Partnership, to improve service delivery. This emphasis is also critical for improving UNIDO's delivery of programmes co-financed by the Global Environment Facility (GEF).

6. PTC/ENE has restructured to ensure that UNIDO's services respond more effectively to Member States and that UNIDO's interventions are leading edge and reflect the ongoing convergence of energy systems and technology (i.e. distributed generation, digitalization, storage). Additionally, an evaluation of PTC/ENE's impact over the last decade is underway, systematically analysing completed and ongoing projects to identify opportunities to improve performance and UNIDO's overall development impact.

7. Both departments are closely involved in the development of the UNIDO-wide Integrated Results and Performance Framework, ensuring a close alignment of programmatic objectives with measurable progress towards achieving the Sustainable Development Goals (SDGs).

III. Technical assistance to industry

8. Together with the GEF, UNIDO has launched GCIP to identify and commercialize transformational innovations. GCIP accelerated over 860 start-ups, contributing to private sector development in eight partner countries. In addition to launching the 2017 Global Cleantech Innovation Index, GCIP will further expand its geographic scope and broaden impact categories as of 2018 to provide innovative solutions in energy, food and urban systems.

9. The global Green Chemistry initiative, launched by UNIDO and Yale University, has been fostering innovation by holding workshops and training courses, and by developing university curricula, to promote the adoption of Green Chemistry in six target countries.

10. UNIDO is implementing eco-industrial park (EIP) projects in seven countries (China, Colombia, India, Morocco, Peru, South Africa, and Viet Nam). Starting in 2019, UNIDO's EIP activities are planned to increase significantly in magnitude and impact through the global EIP programme, funded by the Government of Switzerland.

11. UNIDO's artisanal and small-scale gold mining (ASGM) programme has grown from technology transfer interventions to an integrated approach that covers formalization, supply chain and mercury-free gold extraction, supporting the implementation of a wide range of SDGs.

IV. Policy and regulatory support

12. UNIDO supports 20 countries with the adoption of standards in the ISO 50001 family as national energy management standards. It also supports their technically sound deployment through the training and qualification of workforce and service

providers, with 600 people qualified as "Energy Management Systems" (EnMS) experts and more than 400 as Energy System Optimization experts.

13. In parallel, UNIDO has worked to expand the scope of its core normative function for energy efficiency in industry by initiating work and service streams to promote and support minimum energy performance standards and technical regulations for industrial equipment in China and Egypt.

14. UNIDO convened a plenary session at the Eco Global Forum 2018 in Guiyang, China, as a starting point for developing carbon neutral infrastructure along the Belt and Road Initiative (BRI). This project provides a standardized framework to ensure infrastructure is carbon neutral, and to de-risk and spur investment from financial institutions in BRI countries.

15. PTC/ENE in partnership with the Department of Trade, Investment and Innovation is working on technical guidelines for the development of international standards for small hydropower plants. Funded by the Government of China, the project creates job opportunities through sustainable industrialization and is part of UNIDO's effort to help developing countries apply clean energies.

16. UNIDO assists more than 60 countries to develop and update their national implementation plans for the Stockholm Convention and conducts Minamata Convention initial assessments in 24 countries, while leading national action plans for the ASGM sector in seven countries. For the Montreal Protocol, UNIDO implemented Hydrofluorocarbons phase-out management plans in 86 countries, and carried out institutional strengthening projects in over 70 countries.

17. With the World Bank Group and the German Agency for International Cooperation, UNIDO contributed to the normative side of EIP development through the publication of "An International Framework for Eco-Industrial Parks (2017)".

18. Through the Partnership for Action on Green Economy (PAGE), UNIDO aligns green industry policymaking with circular economy principles and works with governments of countries participating in PAGE to scale up the environment activities by UNIDO.

19. Through the Global Mercury Partnership, UNIDO is providing technical guidance to parties of the Minamata Convention, co-leading the ASGM and chlor-alkali focal areas.

V. Global forums and networks

20. UNIDO's Member States were engaged in meetings and discussion throughout the year to provide inputs for UNIDO contribution to the High-Level Political Forum's (HLPF) review of SDG 7, 12 and 17. As part of these consultations, a special session of the Vienna Energy Forum (VEF) was convened in May 2018. The VEF was followed in July by the HLPF review in New York where policy recommendations from the Board were presented on accelerating sustainable energy and ISID for sustainable and resilient societies.

21. In October 2018, UNIDO is organizing the fifth Green Industry Conference together with the United Nations Economic and Social Commission for Asia and the Pacific and the Government of Thailand. The Conference will serve, inter alia, to establish future Green Industry conferences as a global process informing the international policy landscape.

22. On 14 and 15 November 2018, UNIDO is organizing an international meeting in Vienna on Circular Economy, with a focus on recycling industries. The meeting will act as an extension, on a technical level, of the informal briefings to Member States on Circular Economy.

VI. Outlook

23. The re-orientation of PTC/ENV's portfolio to comprehensively address the global implementation and implications of the Circular Economy will continue. For example, UNIDO will promote a value chain approach, together with global fashion brands, for the sustainable management of persistent organic pollutants in the cotton, textile and garment sectors. Furthermore, the forthcoming global programme on EIPs will promote policy, technical and financial interventions that are fundamental to establishing a Circular Economy.

24. UNIDO's engagement with the Green Climate Fund (GCF) continues on the one hand through a series of "GCF Readiness Projects" with the Climate Technology Centre and Network, the first of which was now approved. On the other hand, it continues through the promotion of UNIDO's "Energy Management Systems (EnMS) Programme". This programme demonstrates a very high degree of cost efficiency relative to greenhouse gas mitigation, while leveraging hundreds of millions of dollars in investments by partner companies. The EnMS programme thereby offers the potential to unlock significant markets for the effective deployment of GCF climate finance.

VII. Action required of the Board

25. The Board may wish to take note of the information provided in the present report.